

# SCOTTSDALE TRANSPORTATION COMMISSION REPORT



**To:** Transportation Commission  
**From:** George Williams, Sr. Traffic Engineer  
**Subject:** School Zone Designation Guidelines and School Safety Program  
**Meeting Date:** February 16, 2012

## ITEM IN BRIEF

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### **Purpose:**

To provide Transportation Commission with an overview of the current laws and engineering guidelines related to school area traffic. Staff will also provide a brief update on staff involvement in school related projects and reviews.

**Action:** Information item

### **Key Considerations:**

Staff will explain the related federal codes, state laws and engineering standards related to school traffic control including the designated 15 m.p.h. school crossings.

Staff will summarize the extensive efforts made by staff to improve school site traffic in recent years.

***Scottsdale School Program***

***Transportation Commission  
Meeting***

***February 16, 2012***

# *Schools...*

- Federal Code
- State Law
- Engineering Guidelines
- Local Practice

# ***Federal Code...***

- **The Federal Highway Administration, through a committee of national experts and reviewed by traffic engineers around the country, develops the Manual on Uniform Traffic Control Devices (MUTCD).**
- **The MUTCD is incorporated by reference in 23 Code of Federal Regulations (CFR) and shall be recognized as the national standard for all traffic control devices installed on any street, highway, bikeway, or private road open to public travel.**

# ***State Law...***

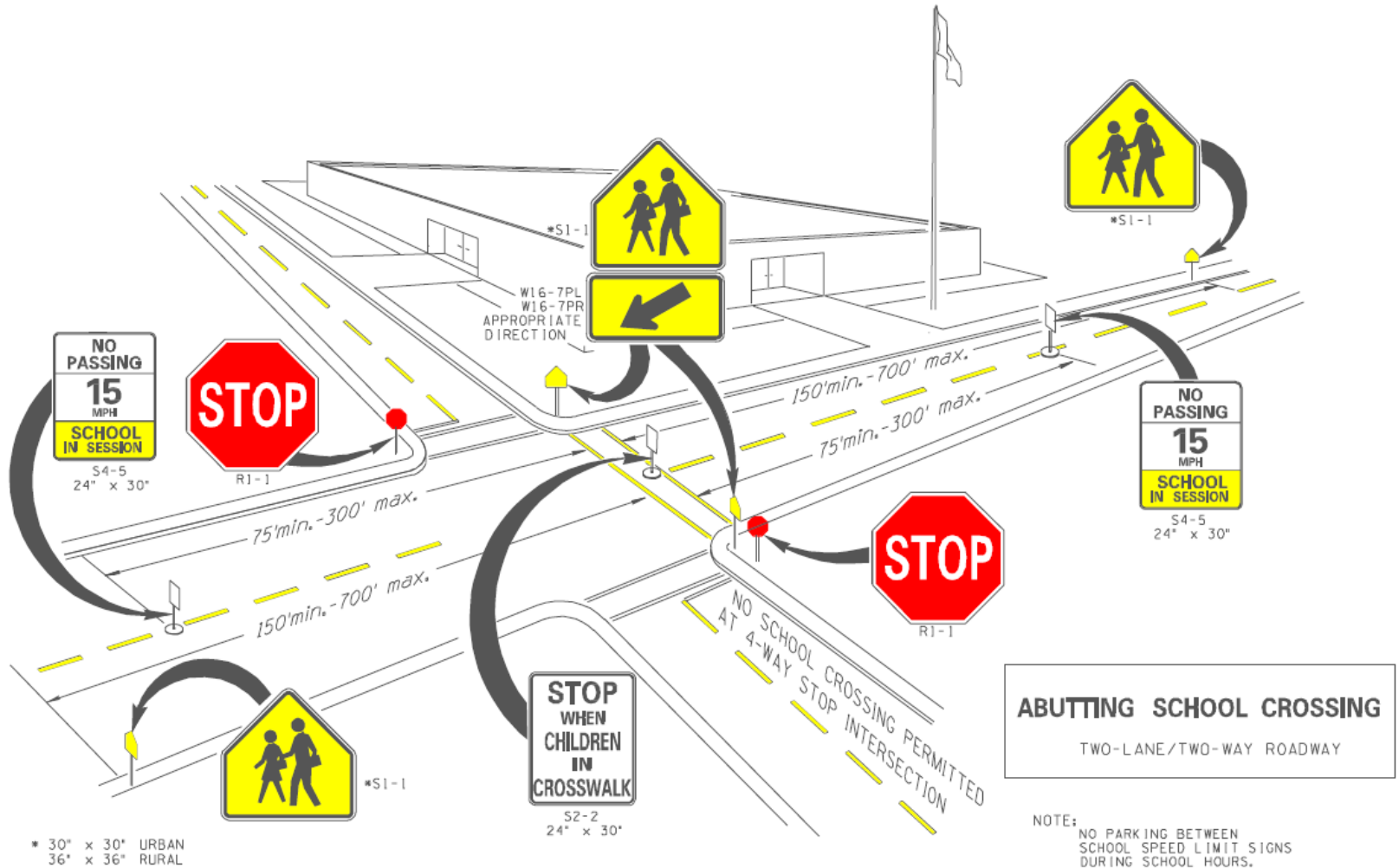
- Each State is required by Federal Code to adopt a state manual in compliance with the Federal MUTCD
- State Law requires the Arizona Department of Transportation (ADOT) to adopt a state manual in compliance with the federal manual and requires all local jurisdictions to comply with the state adopted manual.
- The ADOT publication **Traffic Safety for School Areas Guidelines** is incorporated in the state manual and is the engineering standard for Arizona.

# Students Crossing the Street

- Several crossing options provided by law
  - Grade separation
  - Stop controlled crosswalk
  - Signal controlled crosswalk
  - Roundabout controlled crosswalk
  - Pedestrian refuge islands
  - Flashing beacons
  - Designated 15 mile per hour school crossings
    - The 15 mph rollout signs are exclusive to the designated school crossing as described in state law.
    - Other reduced speed limit zones are different and are used to improve speed compliance based on an engineering study separate from a designated school crossing.

# Typical School Crossings

## SCHOOL CROSSING SIGNS AND MARKINGS

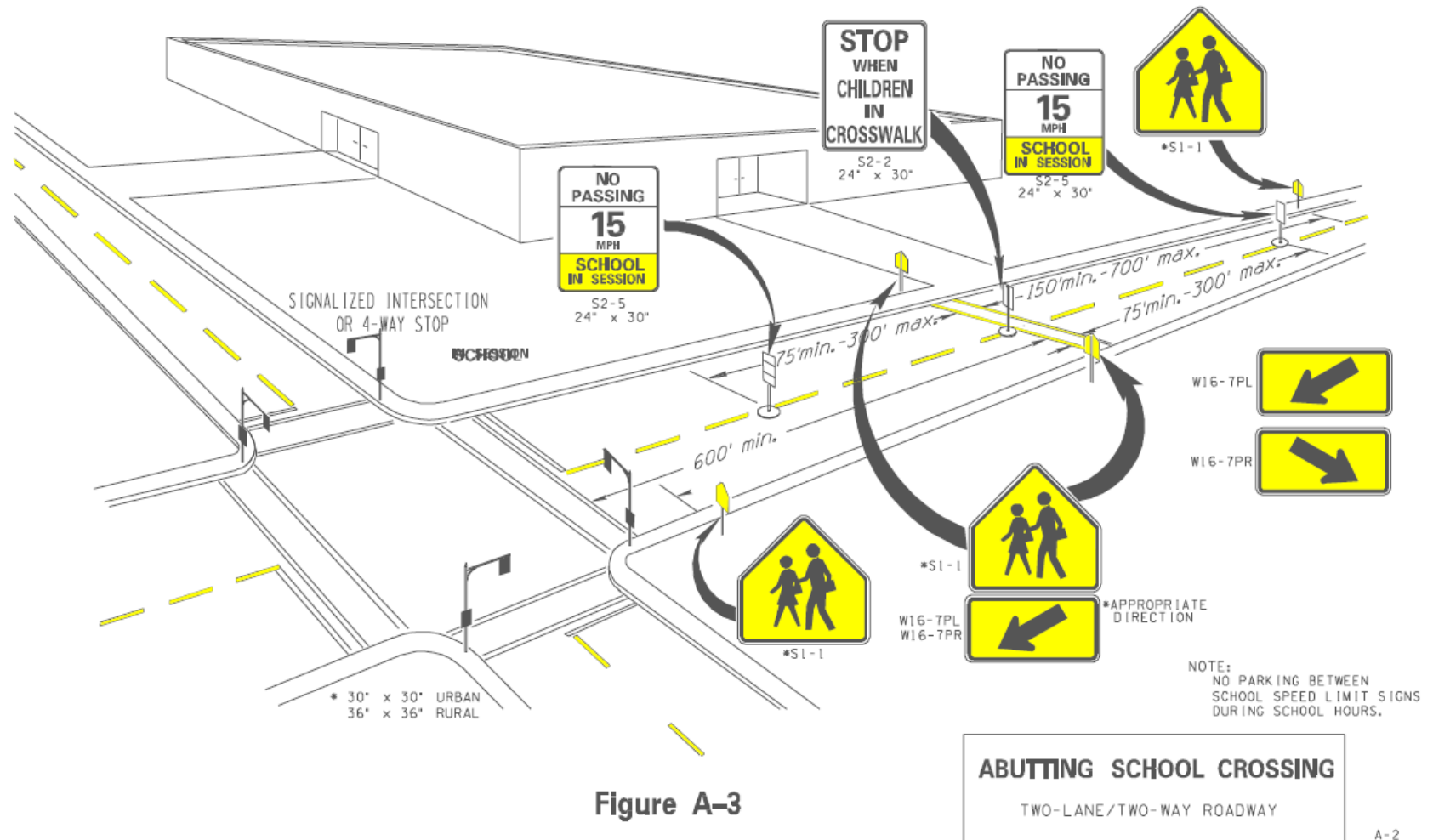


# Designated School Crossings

- “At no time shall a School Crossing be used to control speed, except as stated in A.R.S. 28-797 at a bona-fide installation where children are required to cross the street or highway.”
- “School Crossings shall not be established at any school that has no walking students or to create a drop-off/pick-up area on the opposite side of the roadway for the purpose of crossing children.”
- “School Crossings shall not be established on approaches where traffic is controlled by a STOP sign. A STOP sign is the least violated of all regulatory traffic controls.”
- “A School Crossing typically should not be established within 600 feet of a STOP sign, traffic signal or another School Crossing on the same street.”
- “School Crossings shall not be installed so as to encourage unlawful drop-off or pick-up of students.”



# Typical School Crossings



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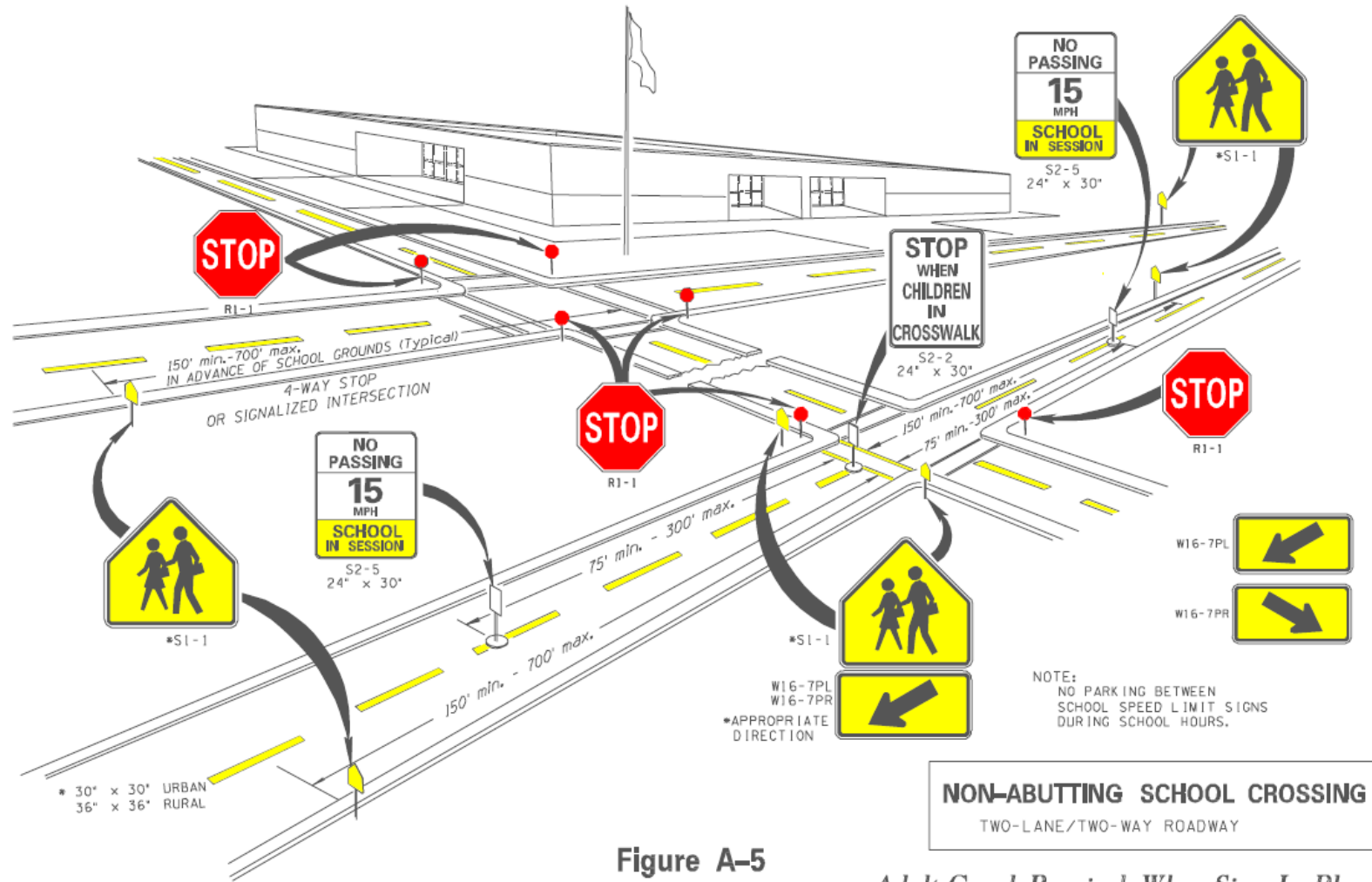


Figure A-5

Adult Guard Required When Signs In Place

# ***Scottsdale's School Program***

## ● Current program started in 2005

### ● Goals

- Improve transportation safety at school sites for all transportation users.
- Focus on improvements that affect most users, most vulnerable users, can be implemented quickly and those that are most cost effective.
- Observe each public school drop off and pick up to determine patterns for future comparison and prioritization (Get a baseline of issues).

# ***Scottsdale's School Experience***

## **Certifications**

-  Six licensed Professional Engineers
-  Four nationally certified Professional Traffic Operations Engineers (2426 nationwide)
-  One nationally certified Professional Transportation Planner (278 nationwide)
-  Two nationally certified Safe Routes To School (SRTS) trainers (~120 nationwide)





## **Experience**

-  Written over 60 school audits
-  Performed over 200 school observations
-  Performed 5 SRTS training workshops (Scottsdale, Phoenix, Tempe, Gilbert & Fountain Hills)

## **Projects**

-  Worked as lead or team members on over 60 school improvement projects

## Students crossing streets to get picked up offsite

-  Always safer to pick up on site and avoid potential conflicts with vehicles.
-  Improve safety, efficiency and convenience of on-site drop off and pick up to encourage parents to come on site.
-  Stagger drop off & pick up.
-  Encourage bus riding, carpooling walking and bicycling.

## Driver Inattention/Disregard

-  Increase driver awareness and compliance through signage & staff visibility.
-  Increase driver awareness and compliance through visible enforcement

# ***Biggest Concerns***

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# ***Typical Recommendations***

- Parking prohibitions
- Improve drop off & pick up procedure
- Improved signing and markings
- Sidewalk ramps
- Sidewalk connections
- Pedestrian Refuge Islands
- Remove vegetation and improve visibility
- Relocate drop off and pick up location



# *Typical Follow Up*

- Meetings with schools to discuss procedures and options
- Studies to determine proper traffic control (Signals, Stops, School crossings, Speed limits, roundabouts, left turn arrows etc). Again these studies and determinations are based on state law and federal code which in turn are based on engineering guidelines, engineering study, analysis and best practices.
- Implement plan or project





## Grayhawk Elementary

Restripe driveway to allow access to parking lot

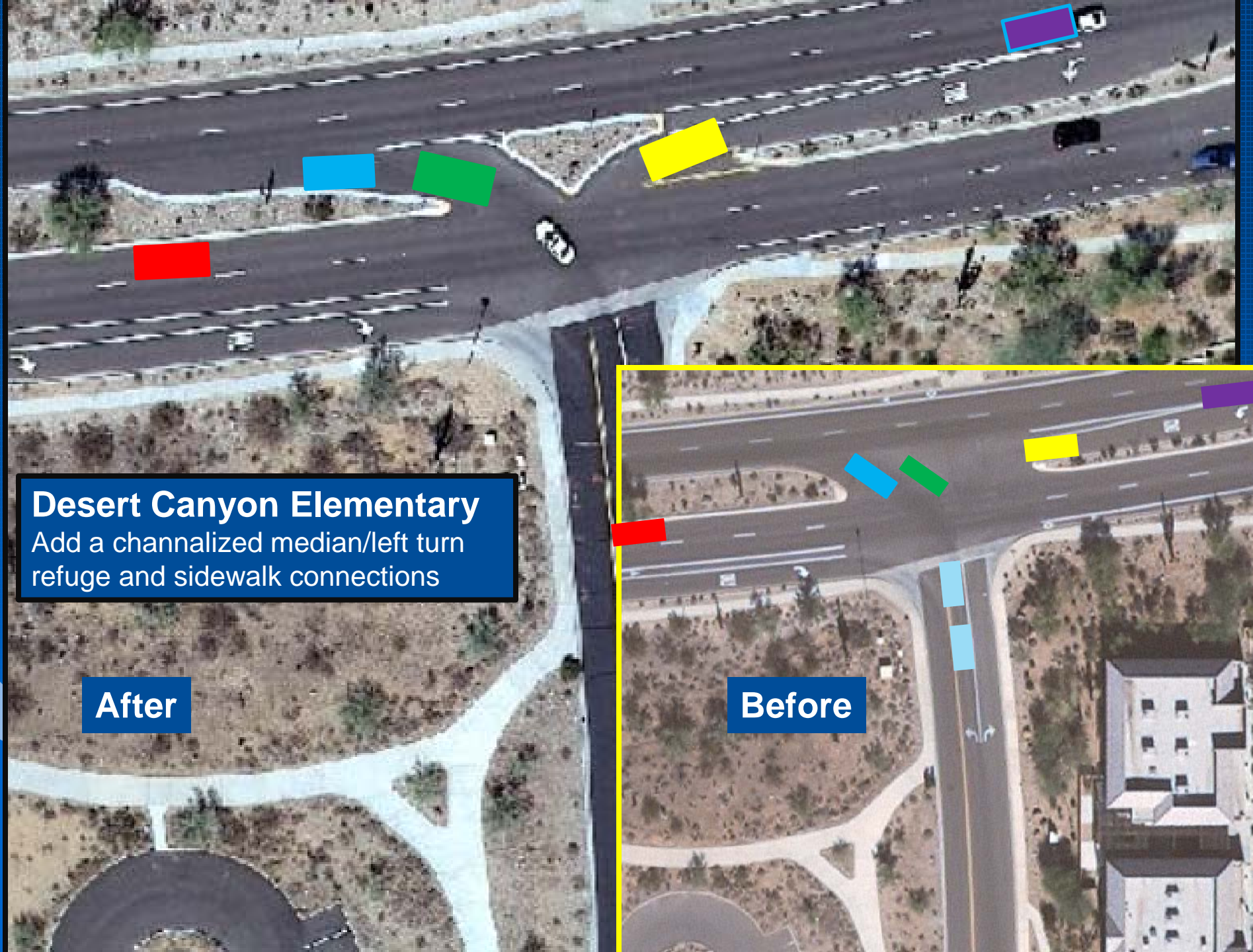


## Desert Canyon Elementary

Add a channelized median/left turn refuge and sidewalk connections

After

Before





## Anasazi Elementary

Narrow pedestrian crossing and reduce travel lanes to improve pedestrian safety

124TH ST

Before

N 124TH ST

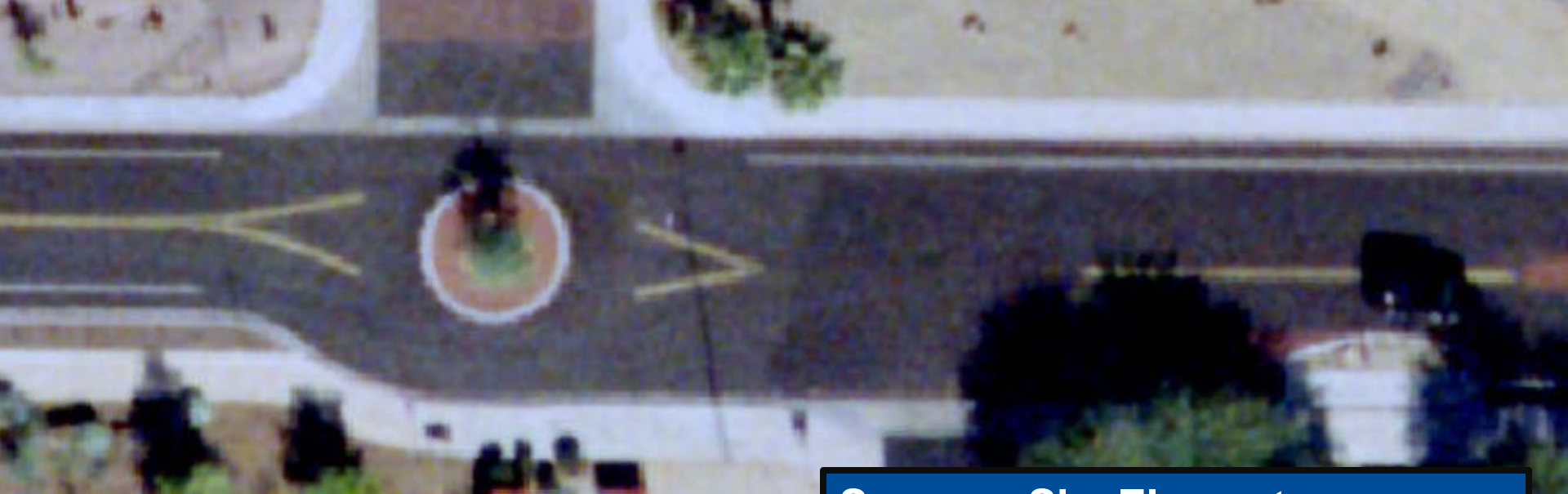
After

An aerial photograph of the Saguaro High School campus. The school building is a large, white, rectangular structure with a dark roof. To its left is a large, circular green lawn area. In front of the school is a large parking lot filled with cars. To the right of the parking lot is a road with several lanes. Three red arrows point from a central text box to three specific locations on the road: one at the top right, one at the bottom right, and one at the bottom left. These locations are marked with white rectangular signs, indicating pedestrian refuge islands.

## Saguaro HS

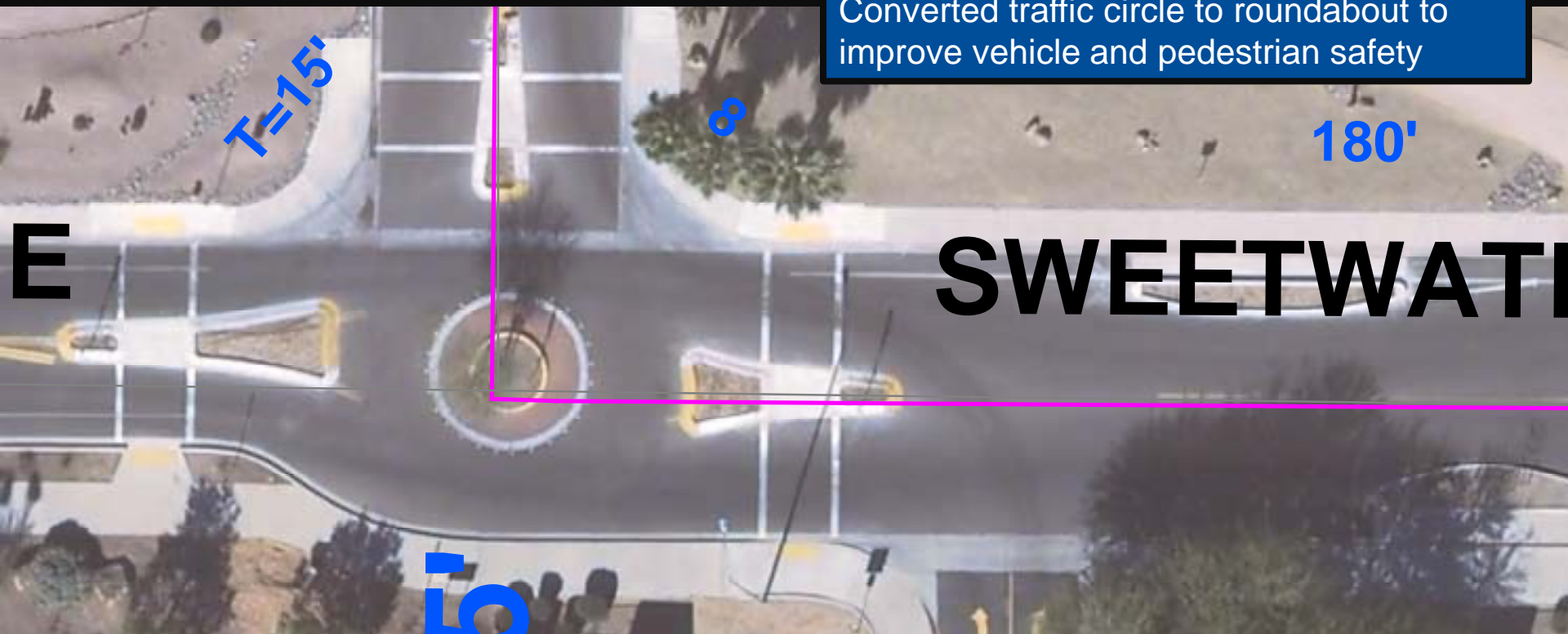
Rebuilt with three  
pedestrian refuge islands





## Sonoran Sky Elementary

Converted traffic circle to roundabout to improve vehicle and pedestrian safety



# *Questions?*